

INDEXED

Sept. 7, 1879

Vilas L. C. M.
Part I.

Dr. C. H. VILAS'

EAR NOTES.

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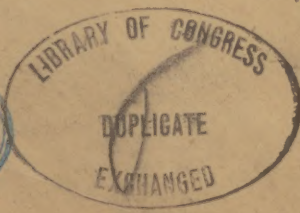
C. H. VILAS, M.D.,

In the Office of the Librarian of Congress, at Washington.



These Ear Notes were prepared to assist in the study, and form the basis of the didactic lectures on the embraced subjects as given by the author at the Hahnemann Medical College and Hospital, Chicago. They are essentially elementary in their character and are in no sense designed to take the place of, or in any way supersede the treatises on the subjects, but rather to suggest the topics to be further studied, as well as to pick out of the mass of writings the essential fundamental principles and main diagnostic points, and suggest the line of treatment. Their cordial reception, not only by students, but by practitioners, has seemed to be sufficient reason for a publication more general than was originally intended.

The attempts to prepare an abbreviated materia medica must be always attended with hazard, and will doubtless be found incomplete. Additions of new remedies and well-authenticated symptoms will be made from time to time, and the whole enlarged and improved, may form the basis for a more pretentious work at some future time. But it is not to be expected that any one will always prescribe on local symptoms alone, but be guided by a more thorough knowledge of the remedies otherwise obtained. For their peculiar wording, the author is often alone responsible; but not only in them, but in the preparation of the diseases, all works accessible have been freely used. It is hoped this statement will serve as a full and courteous acknowledgement of the great assistance necessarily derived from many excellent publications.





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Dr. C. H. VILAS'
EAR NOTES.



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MIDDLE EAR.**ACUTE CATARRH.**

Synonym: Otitis acuta media catarrhalis.

CHARACTERIZED by a tendency to harden and stiffen the original tissues.

CHIEF CAUSES. Colds in the head; exanthematous diseases; continued fevers; exposure to cold and wet in any form. Sometimes spontaneous.

SYMPTOMS. Sensation of fullness in the ear; hardness of hearing; noises in the ear, often very annoying; pain worse at night, when delirium may set in; vertigo, and sometimes nausea; general fever; catarrh of the pharynx; anxious expression of the countenance; great restlessness. Membrum tympani swollen and injected.

NOTE. Acute catarrh is an inflammation which causes a secretion of mucus but stops short of the production of pus. Absorption usually takes place, or the secretion is expelled through the Eustachian tubes.

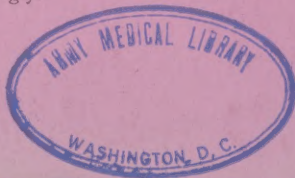
The symptoms given are those of the heaviest form. A light form also attacks, and is very insidious in its course. It generally affects only one, but may affect both ears. It has no pain, causes little deafness, but produces an uncomfortable stuffiness of the ears, and usually slight tinnitus. The membrum tympani shows only the slightest if any change. Patient usually gives slight attention to it, and it goes away in a few days, often to early return again and again until it becomes securely seated.

In its severer forms this disease may easily be mistaken for cerebritis or meningitis. The inflammation generally starts from the pharyngeal end of the tube, but may be reversed. The pain is not generally so severe as in the acute suppurative form, being of a darting nature and not specially limited to the ear; often mistaken for neuralgia. It is increased by talking, coughing, sneezing, etc., and often forms the chief complaint. Alteration in tone of voice, subjective sounds, etc., often accompany this trouble.

Scarlet fever especially of the exanthematous diseases, shows the greatest tendency to implicate the middle ear, and though the result is generally of a suppurative form, being neglected terrible results follow. To avoid mistakes, either in diagnosis or treatment, look into the ears of all suspected cases. The "ear-ache" of childhood is identical with the milder forms of this disease.

LOCAL TREATMENT. In the early stages, prompt application of the hottest water that can be borne, constantly increasing its heat as it can be tolerated. The aural douche is best for this, or a bag syringe, the bag being hung up at a sufficient height to give the requisite gentle force. A few drops of a two to five-grain solution of atropia sulphate dropped into the ear, provided the drum-head be imperforate, will quickly, in combination with hot water, relieve the worst pain. Children only require a solution of one-half the strength. A little squirting of warm water with a half-ounce, or ounce, glass syringe around the auricle, or down the neck, as is usually done, will not suffice. Inflation of the tympanum with Politzer's apparatus, or otherwise, is necessary to let out the secretions; or if much is secreted, or inflation impracticable, paracentesis of the drum-head should be at once performed and repeated as often as essential. Well done, no harm whatever will follow. If attack is mild, inflation and remedies will control. Keep the patient from stuffing the ear with oils, molasses, onions, or other troublesome foreign bodies. If the mastoid region becomes involved, a free incision should be made (see Mastoid Complications). Poultices to the internal parts are dangerous, and not to be used unless absolutely necessary, it being almost impossible to limit their effect.

The great object of the treatment is to prevent suppuration. When once suppuration has set in however, the case has become one of the suppurative form, and must be treated accordingly.



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MIDDLE EAR.

ACUTE SUPPURATION.

Synonym: Otitis acuta media purulenta.

CHARACTERIZED by a tendency to break down and destroy the original tissues.

CHIEF CAUSES. Often a direct result of somewhat prolonged acute catarrh; always preceded by it, though in many cases the former is overlooked and discharge of pus the first thing noticed.

SYMPTOMS. In severe cases the symptoms are rapid and violent. All the symptoms of acute catarrh are present, greatly intensified, as a rule. The pain is intense, causing great suffering, and is generally referred directly to the ear, though extending to the eye and temple, and backwards to the occiput. General fever and tendency to delirium are usually marked. Great liability to confounding the disease with brain trouble. The membrum tympani bulges out, is swollen and injected, and not unfrequently is colored yellow from the pus behind.

Diagnostic points will be found in the fact that any given quantity of mucus in the tympanum will not cause the bulging out of the membrum that a like quantity of pus will. This bulging is usually confined to the posterior half of the membrum. The pain is usually much more intense than under the catarrhal form, and accompanied by a general systemic disturbance. With all this, however, the auricle and meatus may be quite insensible to gentle traction, freeing all suspicions of external otitis as the cause of the pain.

NOTE. Acute suppuration is an inflammation which quickly passes over the mucous stage and hurries on to purulent inflammation. Unlike acute catarrh, it is almost never insidious in its attack, but bold and pronounced.

The tympanum in such attacks is practically by reason of the closure of the Eustachian tube a shut cavity, and confines a raging abscess. On account of the close proximity of the cranial cavity and its contents, and its intimate connection with the tympanic cavity, the life of the patient is often greatly endangered, and by no means infrequently lost by bad management. Prompt, judicious treatment is sometimes necessary to save life, and often saves months of after-treatment in the event of recovery.

In general, swelling in front of the auricle is usually of little moment; behind the auricle it commands attention. In case the mastoid region becomes involved it should be treated on the principles laid down under Mastoid Complications.

The tendency of this disease is to destroy the drum-head and sweep away the contents of the tympanum. Such dire results are to be carefully guarded against, as destructive of hearing. If it passes into a chronic form, treatment is tedious and unsatisfactory.

LOCAL TREATMENT. The congestion and pain are to be reduced as quickly as possible. Hot water, as indicated under Acute Catarrh, will do this, though great relief to the pain will be derived from putting a few drops of a two to five-grain solution of atropia sulphate in the ear, provided perforation has not taken place. The tendency to poisoning by the solution running directly into the pharynx, must not be forgotten. Children only require a solution of one-half the strength. A paracentesis should be done early; if pus has formed it lets it out; if not, the relief to the pain is very grateful, and renders a knowledge of the condition of the tympanum certain.

Caution.—Avoid all forms of continued poulticing.

GENERAL TREATMENT must be directed to relieving the pain and producing sleep. Special attention should be given to the free action of the skin. In the remedies are found most valuable aid, and they should be thoroughly studied and carefully prescribed.

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MIDDLE EAR.

CHRONIC CATARRH.

Synonyms: Nervous deafness; Proliferous inflammation; Sclerosis; Progressive hardness of hearing; Anchylosis of the stapes, etc.

CHARACTERIZED by a tendency to harden and stiffen the original tissues.

CHIEF CAUSES. Remotely, a feeble state of the system, due perhaps to acquired or inherited syphilis, phthisis, etc. Defective hygienic care, as want of proper exercise, food, etc. Chronic catarrh of the throat. Repeated attacks of acute catarrh of the middle part of the ear. Diphtheria. Scarlet fever. Inseparable from certain climates, especially after any exhausting illness.

SYMPTOMS. Sense of fulness in the ear; more or less deafness; vertigo often; sensation of air-bubbles breaking and cracking in the ear; noises, of varying sounds, of which great complaint is usually made; imperfect action and changes in the Eustachian tubes; chronic-naso-pharyngeal catarrh; changes of more or less injury in the drum-head, such as alteration in position and shape of the cone of light, deposits, sinking and atrophy. The ear-wax diminishes in secretion; it then becomes brittle, and later on stops altogether.

The earliest subjective symptoms are generally noises and growing hardness of hearing, which usually come on suddenly, and oftenest affect the left ear first, and may then pass to the companion ear. Sharp twinges of pain are felt every day or two. All the subjective symptoms are intensified by fatigue, prolonged conversation or nervous exhaustion of any kind.

NOTE. This disease is very tedious in its course; often quite as much so in its cure. Many names have been given it, all more or less noting some of the changes, and indicating a wide variance and incomplete knowledge of its pathology. The noises in the ear are frequently most distressing, and have caused suicide. There is no special sound indicative of special lesions. Each patient is most likely to associate some familiar sounds with them. In common with the appearances of the drum-head, they have been made subjects of exhaustive study, with as yet imperfect results.

Two classes seem however to be well marked, the moist and the dry, and materially affect the prognosis, the former being far more amenable to treatment than the latter. In the former, under suitable medication and local treatment, a more or less satisfactory restoration of hearing and cure may be foretold; in the latter, in the hypertrophied stage the prognosis is unfavorable; in the atrophied stage hopeless. Proliferating bands are often thrown out, quite like spider-webs, and tie down with firm grasp the delicate structures. A peculiar odor, well simulated by moistening the finger with saliva and allowing it to slowly evaporate, may be noticed about the breath of the majority; most marked in females. Relapses are very common and should not discourage.

For convenience in treating of the subject, and the more properly to describe a large number of cases, a class lying in the tract between the acute and chronic forms, are called subacute. They are such cases as have passed through the acute and linger on the border of the chronic form. There is no special line of demarcation, but such cases yield under less treatment, though were time of existence the only element, they would justly be classed as chronic.

No branch of aural disease requires such a thorough knowledge of the whole subject as this often formidable affection. The incomplete knowledge of the pathology, the inaccessible position of the parts to be treated, and the often vacillating mind of the patient, alike combine to render the treatment the most unsatisfactory of all aural practice. A hap-hazard empirical plan of trying this and that in the expectant hope of relief, has nearly always been pursued ere the patient comes under scientific treatment; and even then floating memories of old-time necromantic cures are liable to tempt the patient away, to return again worse than ever. The injudicious determination of those who suffer with acute affections "not to tamper with the matter, but let it wear off" places hundreds in the list of incurables.

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MIDDLE EAR.

CHRONIC SUPPURATION.

Synonyms: Otorrhœa; Purulent Inflammation.

CHARACTERIZED by a tendency to break down and destroy the original tissues.

CHIEF CAUSES. Acute inflammation of the tympanum. Diseases of the bones and parts surrounding the tympanum. Diphtheria. Scarlet fever.

SYMPTOMS. More or less deafness. Purulent discharge of a most offensive odor from the tympanic cavity into, and often out of, the external auditory canal. Pus cleansed away, there may be seen perforation of the drum-head, most frequently in the posterior inferior portion, though it may be anywhere, and varying in size from a pin-hole to two-thirds of the membrane. A drop of pus is often adhering in the perforation, and pulsates synchronously with the heart's action. External meatus and outer surface of the membranum tympani have a bright-red appearance due to the constant bath of pus. More or less pus secreted from the walls of the external meatus is also present. General health frequently below normal standard, and pharynx in a catarrhal state.

NOTE. Otorrhœa is the bane of many practitioners, and patients are warned to do nothing, being told that the discharge is innocuous or beneficial, and that a stoppage would be injurious. On the contrary, no harm ever comes from properly stopping a foul discharge; improperly stopped or corked up, under the impression that when no longer seen the suppuration no longer exists, great harm may be done. Death is by no means an infrequent result of neglected otorrhœa; it might follow ignorant and hurtful treatment.

LOCAL TREATMENT. There can be no success without absolute cleanliness of the tympanic cavity and the external meatus. The anatomical relations are such that the foul discharge remains a source of constant irritation and self-perpetuation, instead of flowing away as in many other similar diseases. The ear should be appropriately syringed out as often as necessary to keep it clean, and from five to twenty drops of a saturated solution of carbolic acid to a pint of hot water will be found an excellent solution for this purpose. It is not sufficient to carelessly squirt a little luke-warm water at uncertain intervals from a small glass syringe into or about the auricle. A two to four-ounce hard-rubber aural syringe should be obtained, the hot solution prepared, and the cavities thoroughly cleansed; otherwise success will be problematical. Care is requisite that the patient does not take cold after such treatment. Politzer's bag, or other means of inflation, should be practiced under competent supervision.

Caution.—Local treatment oftener fails to do good from carelessness and inattention of the attendant or patient, than from any other cause. Patience and perseverance are essentials, and are rewarded by success.

Caustics, astringents, etc., will most generally be found unnecessary, and are liable to do great damage. They are useless unless of great strength, and in the same ratio the more dangerous. In a certain number of old, neglected chronic cases, however, their use will greatly accelerate the cure if judiciously used. Nitrate of silver, compound nitrate of silver and sulphate of copper are the most reliable, and must be used in varying strengths and with great care. Solutions of from twenty to forty grains of either of the former to the ounce of distilled water, and of from ten to twenty grains of the latter to the ounce of distilled water are the strengths recommended, though the two former can be used in much stronger solutions. They should be applied directly to the thoroughly cleansed surface. Sugar of lead and powdered alum are not recommended.

GENERAL TREATMENT is usually very essential. The patient should be thoroughly built up, good air, exercise and a proper diet being very necessary to a radical cure. Salt-water cool baths, with friction of the general surface, are highly recommended.

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MIDDLE EAR.

CONSEQUENCES OF CHRONIC SUPPURATION.

POLYPI are a very frequent result of long-continued, badly-treated or neglected suppuration. Though sometimes confounded with malignant growths their diagnosis is generally easy. Usually consist of loose connective tissue, cells and blood-vessels, partaking of the nature of fungus granulations, and grow most commonly from the mucous membrane of the tympanum, more rarely from the surface of the inner half of the external canal. Of a bright-red color, usually granulated like a strawberry, though sometimes smooth, they vary in size from a pin-head to a long, tortuous body closing entirely the external canal, and appearing even beyond the external orifice. They may be attached by a more or less narrow peduncle (pedunculated) or sit upon a foundation approximative to their size, (sessile). Soft and excessively tender, they bleed on slight contact, and constantly bathed in pus, are offensive in odor. Their spongy nature, soft and pliable, often makes the mechanical obstruction of the canal and consequent retention of the pus a source of great danger.

LOCAL TREATMENT consists in removal by any instrument best suited to the position in which they are found. This can usually be quickly and perfectly done, and under competent manipulation results in a permanent cure, slight after-treatment being only necessary. A wire ensnaring the growth and heated suddenly by electricity often quickly removes, and by the application of the resultant actual cautery restrains the usually profuse hæmorrhage. It is pitiable to see the terrible work often made with these growths. A minute drop of acid (chromic, nitric, monochloro-acetic, or carbolic,) will often be all-sufficient for those of small size. A saturated solution of bichromate of potash will sometimes be effectual, and is painless.

After all such treatments a dressing of talc should be applied.

CEREBRAL ABSCESS is not an uncommon result, but often masked in its symptoms. Nausea and vomiting, or a chill usually precedes fatal symptoms. Long tedious brain troubles in exceptional cases; paralysis, coma and death more frequently.



MASTOID COMPLICATIONS.

PERIOSTITIS is the most common complication, and is diagnosed by tenderness on pressure (often extreme), swelling, redness and pain (often violent.)

LOCAL TREATMENT is absolutely necessary and should be prompt. A free incision over the mastoid process down to the bone should be made, and poultices applied. If the incision be made parallel to and about one quarter of an inch behind the auricle, about one half of an inch to an inch in length, and care be taken to cut upwards, it is a simple affair. In the early stages no pus will be found, but the relief to the tension, so important in periostitis, will be most grateful. In latter stages, suppuration may be profuse and of a most foul odor.

Caution.—Redness and swelling are not infrequently present in the mastoid region in connection with aural disease, but require no local treatment.

CARIES AND NECROSIS are consequences of extension of inflammation just described. Symptoms sometimes obscure; should be carefully studied in works specially devoted to aural disease.

EXOSTOSES AND HYPEROSTOSES are bony growths. When congenital occasion little or no trouble; when result of local irritation and consequent on periostitis may require treatment on account of their blocking up the canal. In such case they may be drilled through with a rat-tail file, or a wind or dental engine. Operation dangerous and seldom done.

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DEAF-MUTISM.

CAUSES. The causes of this affection are to be found almost invariably in the middle and internal parts of the ear, such as the results of the exanthematous diseases, (prominent among which are scarlet fever, measles and diphtheria), brain diseases, falls, frights, etc. Congenital often.

SYMPTOMS. Inability to hear sufficiently to imitate speech, and consequent inability to talk.

NOTE. This is not a primary affection, but a condition secondary to disease or congenital defect of the auditory apparatus. With rare exceptions there are no changes in the larynx from which mutism arises. The only reason that the deaf are mute is that the affection is congenital or supervenes at a time when speech is not at all or imperfectly learned. If a patient is deaf at birth, or becomes so during childhood, he will certainly become mute; if he becomes so during youth he is apt to; but if deafness comes on after years of discretion, the chances of mutism are exceedingly remote. Climate exercises a great effect on the production of this affection; even, fertile countries producing the least.

Deaf-mutes may be divided into two classes (1) the congenital and (2) the acquired. Fourth to sixth month of age is the soonest at which an opinion can be formed as to whether an infant is deaf or not. Latter (2) class probably smaller than the (1) former.

It does not require absolute deafness to make a mute. About one-tenth of the whole can hear the human voice as sounds, but are unable to distinguish words; about five-tenths can distinguish loud noises, such as the clapping of hands, ringing of bells, thunder, cannon-firing, etc.; the remainder, about four-tenths, are absolutely deaf.

Congenital deaf-mutism is incurable in the present state of our knowledge of the trouble. It is likewise exceedingly rare that a person once a deaf-mute is ever raised to a higher grade of hearing and consequent speech.

The prognosis of the causes of the deafness, combined with the age of the patient, afford the foundation on which to base an opinion as to the curability of the mutism. In no branch of diseases of the human system does a general knowledge of the infirmities of the body as a whole and complete organism avail more than in this class. Exclusive attempts at special and local treatment bring failure instead of success. It is seldom, however, that an opportunity is afforded a medical man to do anything until too late. The patient is either secluded or placed in some school when the effect is noticed, and the cause is not ascertained.

"The deaf-mute who presents the most favorable conditions for treatment is he whose accidental deafness has supervened at the age at which he begins to hear and speak, and who still retains some faint evidence of hearing and speech. If the organic lesion, the first cause of the infirmity, be seated beyond the nerve centres; if the child be intelligent, and have no brother or sister in the same state as himself; if he be the child of healthy parents, who have no connection by consanguinity, and if he have never previously been under treatment, the chances of cure are numerous; but if all these conditions are met with in the same subject, the chances almost reach to a certainty. On the contrary, they decrease in value in proportion as one or more of these conditions are wanting, and when all are wanting we should entertain scarcely any hope." (*M. Valade-Gabel.*)

LOCAL TREATMENT. This must be guided by a knowledge of the disease causing the deafness, and embraces a full understanding of the procedures recommended under the various known diseases.

GENERAL TREATMENT. Enforced sanitary regulations, such as isolation from all malarious influences, mental rest, cheerful company, warm and abundant clothing, agreeable and remunerative employment.

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EXTERNAL EAR.

ECZEMA.

Divisions: Acute and Chronic.

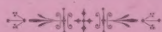
SYMPTOMS. The acute form generally begins with more or less systemic disturbance, and appears locally by the formation of vesicles upon the auricle and within the canal. These soon burst with a discharge of thin serous fluid, which spreads over the skin and dries there, forming crusts or scales. The bursted vesicles form scabs, which if peeled off expose a red surface. The denuded skin under these vesicles ulcerates and pus forms. If a cloth be applied to the discharge from the vesicles, it soon becomes stiff, the discharge drying rapidly. The effusion being always considerable, the auricle becomes swollen and stiff, cracks, and fissures, and the swelling of the canal causes some tinnitus and deafness. The itching and burning is most annoying, but if the vesicles be scratched or torn the trouble is only increased.

Chronic form.—The febrile symptoms and local swelling, itching and burning subside, the vesicles collapse, and dry scabs or crusts take their place. Underneath the scabs will be found considerable pus. The skin is no longer moist but dry, rough, and generally dirty.

NOTE. Eczema is a most troublesome affection, but gets well under patient treatment, and good hygienic conditions. When the chronic form is present consequent on the cessation of menstrual life, taking the place of the usual headaches, it is often exceedingly annoying and obstinate. The irritation from the clothing sets up and perpetuates a discharge which in turn soils the former, and extends down the neck.

LOCAL TREATMENT. Whatever may be the immediate cause of eczema, which at present is at least in dispute, hair-medicines, face-powders, brass earrings, etc., aggravate the trouble and must be done away with. Syringing with hot water allays the itching and keeps the ear clean.

REMEDIES. Alumina, Apis mel., Arsenicum alb., Croton tig., Graphites, Mercurius, Psorinum, Pulsatilla, Rhus tox., Silicea, Sulphur, Tellurium.



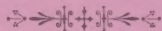
VEGETABLE FUNGI.

Synonym: Otitis parasitica.

The auditory canal is frequently the seat of a class of parasites which materially aggravate or cause inflammations of the part. Most commonly they are secondary to eczema. They can be seen only by the microscope.

SYMPTOMS. Sensation of fulness, deafness, vertigo, heavy dull pain, blackish or whitish flakes blocking up the canal and adhering to its walls.

TREATMENT consists in removing all traces and subduing the inflammation. The forceps and hot water meet these indications better than any of the many parasitocides recommended.



THE AURICLE.

The auricle is the seat of few troubles not associated with the canal, or other adjacent parts.

Frost-bites are common; require no medical treatment unless to exclude the air by emollient cerates or collodion.

Diffuse inflammation and abscesses should be carefully treated, as they are liable to produce great deformity.

It should also be borne in mind that psoriasis, ichthyosis, comedo, acne, and other dermatological, as well as syphilitic diseases, attack this organ.

Malformations and malignant disease are rare.

Deposits of urate of soda are often noticed in gouty subjects, and may cause some pain.

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EXTERNAL EAR.

AUDITORY CANAL.

FOREIGN BODIES. All descriptions of foreign bodies are found in the external auditory canal. Detailed summary useless. Pins and needles, beans, peas, marbles, etc., all find a lodging place there. Greatest danger is from injudicious attempts to remove them, or attempts to blindly probe without seeing what is being done. All kinds of injuries, and even death, have thus most needlessly been produced.

TREATMENT. Never do anything until a thorough inspection with an otoscope has been made. Then decide what is best to do and do not poke around with a probe in the vague wanderings of an uncertain hope that good may result. Proper patient syringing will remove almost every kind of body. There are a great many known ingenious devices, some excellent, some quite the reverse. When however, instruments are necessary, anaesthetize the patient and cautiously dislodge the body and syringe it out. It requires trained hands to properly work within an ear.

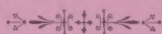
INSPISSATED CERUMEN, or dried and hardened ear-wax, is frequently found in the auditory canal, and should be removed on the same principle as any other foreign body. Its presence must be regarded as a symptom of disease, and its removal but the precursor of other treatment.

The symptoms of its presence are ringing in the ears, deafness, sense of fullness, more or less pain, and often reeling and staggering. It is easily seen with the otoscope.

It is not advisable to remove it all at one operation, unless small in amount and easily loosened. When intensely hard, as it often is, some solvent, (glycerine and oils are simply useless,) such as ten to twelve grains bicarbonate of soda to an ounce of water, or even a saturated solution, may be instilled several times shortly before its removal is attempted.

Caution.—Never use any force to wrench out this substance. The canal is too delicate to bear violent treatment.

After all is removed, and care should be taken to see that such is the case, a little cotton to deaden the shock of the now increased sounds may be used.



FURUNCLES.

Synonyms: Circumscribed inflammation; Boils.

SYMPTOMS. When seated either in a hair follicle or ceruminous gland, the furuncle has in its centre a circumscribed core which must be discharged before resolution takes place. But if seated where the swollen inflamed connective tissue cannot extend itself, as upon bone, the symptoms of tension will be much more severe. The pain will therefore be much greater in the latter than in the former case. In mild cases it is of a burning, sticking or itching character. In all cases it is accompanied by more or less systemic disturbance, such as fever, sleeplessness, and loss of appetite. The auditory canal becomes excessively tender, an examination becomes a great dread; a slight touching with a probe causes extreme agony. The swelling is not always well marked, and on account of the closing of the canal it is difficult to find their exact seat. One may recover only to be succeeded by another and another.

LOCAL TREATMENT. Incise them promptly and use hot water to promote suppuration. If not well marked, find the most tender point and incise that. There is no harm from the free bleeding which may result. No person who has a recurrence will ever object to the knife a second time; its action is most refreshing. The knife should be extremely clean and sharp.